Suicide during the Great Depression

Undergraduate Research Thesis

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Table of Contents:

Introduction

Existing sociological, epidemiological, and economic literature supports a strong correlation between the business cycle and mortality. Suicide mortality is of particular interest. Since the nineteenth century, scholars have wondered how financial conditions influence someone to take their own life. Sociologists and economists traditionally examined community-level demographics and mortality rates with correlation and graphical analysis. Since the mid-twentieth century, the statistical methods for analyzing data have greatly advanced with the rise of cliometrics. Researchers found new links between economic fluctuations and variation in death rates with breakthroughs in panel data, regression analysis, and machine learning. Economic history has fallen under the auspices of the dismal science as only the rare historian now practices demography. In this migration from history to economics departments, the focus shifted from anecdotal storytelling to econometric modeling in an attempt to explain the causal effect of the business cycle on life and death.

Economic historians who analyze the effects of government spending during a crisis primarily turn to the Great Depression and the New Deal for data. Over the past half-century, many scholars produced novel datasets from Roosevelt-era reports on government spending. Each decade, researchers shrunk the units of time from years to months and location from states to cities, adding new controls to home in on how federal expenditure influences social change. Particularly during the Great Recession, interest in the Great Depression and the New Deal surged. Authors like Barry Eichengreen wrote books that compared the Great Depression and

Great Recession policy.[1] Scholars published paper after paper studying the effect of New Deal programs on dependent variables from marriage rates to car purchases.[2]

Mortality is a primary outcome of interest to these academics. A typical estimating equation regresses New Deal spending onto infant mortality or suicide rates from 1929 to 1940.[3] These models exploit the within state or county variation in New Deal spending over time after accounting for national trends and location-specific characteristics. For example, Fishback, Haines, and Kantor (2007) estimated the Roosevelt administration prevented one suicide, half a homicide, and 2.4 deaths from infectious disease with each additional $2 million of relief in 2000 dollars.[4] Stuckler et al. (2012) found that the number of bank suspensions in an urban area was correlated with an increase in suicide rates at the 95 percent significance level.[5] Some authors argued New Deal programs decreased malaria while other researchers found evidence the Tennessee Valley Authority (TVA) increased its prevalence. Stoian and Fishback (2010) found no reduction in elderly deaths attributed to Old Age Assistance while Balaan Cohen (2009) found a reduction in elderly mortality after 1940.[6]

Most of these papers addressed the reality that New Deal politicians considered need when allocating funds rather than randomly throwing money around. Instead of only looking at

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[1] Eichengreen, Barry. 2016. *Hall of Mirrors: The Great Depression, the Great Recession, and the Uses-and Misuses-of History*. Reprint edition. Oxford New York Auckland: Oxford University Press.
[2] Hill, Matthew J. 2015. "Love in the Time of the Depression: The Effect of Economic Conditions on Marriage in the Great Depression." *The Journal of Economic History* 75 (1): 163–89. https://doi.org/10.1017/S0022050715000066.; Hausman, Joshua K. 2016. "Fiscal Policy and Economic Recovery: The Case of the 1936 Veterans' Bonus." *American Economic Review* 106 (4): 1100–1143. https://doi.org/10.1257/aer.20130957.
[3] Fishback, Price. 2017. "How Successful Was the New Deal? The Microeconomic Impact of New Deal Spending and Lending Policies in the 1930s." *Journal of Economic Literature* 55 (4): 1442-1443. https://doi.org/10.1257/jel.20161054.
[4] Fishback, Price V., Michael R. Haines, and Shawn Kantor. 2007. "Births, Deaths, and New Deal Relief during the Great Depression." *The Review of Economics and Statistics* 89 (1): 1–14.
[5] Stuckler, David, Christopher Meissner, Price Fishback, Sanjay Basu, and Martin McKee. 2012. "Banking Crises and Mortality during the Great Depression: Evidence from US Urban Populations, 1929–1937." *J Epidemiol Community Health* 66 (5): 410–19. https://doi.org/10.1136/jech.2010.121376.
[6] Fishback (2017)

the direct effect of expenditure on mortality, scholars exploited the Roosevelt administration's interest in winning reelection to estimate the causal influence of the recovery, relief, and reform spending of the 1930s. For example, one of the most popular instruments is a measure of swing-voting first developed in Wright (1974). The instrumental variable (IV) is a location's history of voting democratic. The researchers then predicted the geographic variance in New Deal funds per capita with this indicator. As swing states should not be inherently wealthier or have a higher mortality rate than non-swing states, the predicted New Deal funding should provide an unbiased estimation of the relevant outcome variable.[7]

While researchers accounted for endogeneity through the use of instrumental variables, most failed to consider the effect of measurement error when modeling changes in mortality. Reliance on official death statistics is common to each paper. Scholars who study 1900 to 1940 must fundamentally understand how mortality reporting changed during this period. Before 1946, the Bureau of the Census tabulated a yearly count of vital statistic records received by the Public Health Service from state and county agencies. However, it took decades to estimate mortality rates by cause for the continental United States.

In 1900, ten states in the Northeast and the District of Columbia began a national registration area to calculate broader trends in American fertility and mortality. Over the next four decades, additional states entered the registration area once they demonstrated at least 90% completeness of death registration. All 48 states met this standard by 1933, however, states in the South where the majority of Black Americans lived before the Great Migration were among the last to join the national registration area. Even after national inclusion, rural areas of the South likely underreported mortality, specifically for African Americans. Papers on this topic

[7] Fishback (2017) 1444-1445

overwhelmingly fail to address the variation in enumeration by state and race into account when estimating the effect of federal aid.[8] Additionally, vital statistics on suicide are uniquely flawed as they provide a non-random undercount of cases. Since each paper studying mortality uses geographic rates as the dependent variable, the authors likely underestimated the effect of the New Deal on suicide mortality. Researchers also focused on suicide only after Roosevelt was elected as it is difficult to interpret the lack of spending by Hoover. By 1933, suicide was already decreasing.

The question of why national suicide rates reached an all-time high in 1932 was last addressed by John Kenneth Galbraith, one of the great qualitative economic historians. In his book 1955 book, he claimed that there was no increase in suicides due to the Great Crash of 1929.[9] Galbraith's argument contained flaws. He never answered the fundamental question, who drove the suicide rate up precipitously during the 1930s? He concluded it was not New York stockbrokers with bank accounts in the red but failed to propose an alternative.

Once again, the impact of federal spending is in the news as Congress approved unprecedented relief to alleviate the economic fallout of the COVID-19 pandemic. In April 2020, former President Trump raised concerns that increased social isolation and financial stress could lead to a wave of suicides. His solution was to propose reopening businesses. Many politicians criticized the Commander in Chief's prescription but agreed with the diagnosis. Members on both sides of the aisle voiced concern about a suicide epidemic in tandem with the coronavirus crisis.

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[8] Ewbank, Douglas C. 1987. "History of Black Mortality and Health before 1940." *The Milbank Quarterly* 65: 108. https://doi.org/10.2307/3349953

[9] Galbraith, John Kenneth. 2009. *The Great Crash 1929*. First edition. Boston: Mariner Books.

Scholarship by Angus Deaton and Anne Case informed much of this alarm. Their 2020 book *Deaths of Despair and the Future of Capitalism* raised concern over increasing death rates attributed to suicide, alcohol poisoning, or opioid overdoses for middle-aged white men without a college education over the past two decades.

However, in a *Washington Post* opinion piece in June 2020, Case and Deaton wrote that the relationship between unemployment and suicide has not held since the Great Recession and that "Trump's pet theory about the fatal dangers of quarantine is very wrong."[10] Yet even in June, three months into the United States coronavirus response, academics could not estimate the fallout of this pandemic. Therefore, many again turned to the Great Depression for insight into the fundamental question of whether government intervention can prevent deaths of despair.

Despite knowing the regression coefficients of per capita federal expenditure on a locality's suicide rate from research done in the wake of the Great Recession, there is still a factual question of who took their own life during the Great Depression and why. No histories since Galbraith focus solely on suicide trends during this period. Additionally, economists have not considered individual case studies similar to how epidemiologists analyze suicide. This is a fundamental gap in the literature as an attempt to explain decreases in the suicide rate during the New Deal must first understand its increase during the Great Depression. This paper attempts to provide that background through analysis of demographic and regional trends in official Great Depression mortality statistics and the influence of finances and national economic indicators in obituaries. The qualitative evidence supports the hypothesis that suicide is driven by a breakdown in structure attributed to unemployment rather than an empty bank account.

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[10] Case, Anne, and Angus Deaton. 2020. "Perspective | Trump's Pet Theory about the Fatal Dangers of Quarantine Is Very Wrong." *Washington Post*, June 1, 2020. https://www.washingtonpost.com/outlook/suicide-coronavirus-opioids-deaths-shutdown/2020/05/31/bf6ddd94-a060-11ea-81bb-c2f70f01034b_story.html.

Quantitative evidence suggests that an increase in unemployment is more relevant to a change in the suicide rate and that these fluctuations had a greater effect on older, white men during the Great Depression than other demographic groups. Hopefully, a greater understanding of suicide and the economy during the Great Depression can inform policymakers today during the coronavirus recession.

Literature Review on Suicide and the Business Cycle

The question of whether business cycles influence suicide is not new. In 1897, Émile Durkheim raised the question of what causes individuals to take their own lives in his monograph, *On Suicide.* As one of the earliest writers to methodologically use statistical records in making a larger point about society, Durkheim is considered the first social scientist. In *On Suicide*, Durkheim classified the causes of suicide into three categories: egoistic, altruistic, and anomic. While he defined egoistic suicide as deaths due to isolation and altruistic suicide as those due to sacrifice, most interestingly he defined a third class of suicides that can be attributed to the failure of society. In describing the prevalence of these anomic deaths, he wrote, "It is a well-known fact that economic crises have an aggravating effect on the suicidal tendency."[11] Durkheim cited nineteenth-century financial crashes and the subsequent rise in suicide rates, however, he did not agree with the theory that declining wealth and comfort leads to a higher suicide rate.

Rather than attributing a rise in mortality to an increase in difficulty, Durkheim argued that spikes in suicides are also seen during economic booms. He found no evidence of higher suicide rates in perpetually poverty-stricken nations like Ireland at the time or an increase in self-inflicted deaths as the price level rose and real income dropped in Prussia. Rather, he argued an increase in the rate is rather caused by a deviation from the mean: "Every disturbance of equilibrium … is an impulse to voluntary death."[12] Durkheim's fundamental argument that the cyclical nature of the business cycle influences the suicide rate rather than the booms or busts specifically was unique and has been repeatedly tested over the past century.[13]

[11] Durkheim, Emile, John A Spaulding, and George Simpson. 2005. *On Suicide: A Study in Sociology*. 202-220
[12] Durkheim 206-207
[13] Durkheim 205-207

In her 1928 book *Suicide*, Ruth Shonle Cavan, a University of Chicago sociologist, followed in Durkheim's footsteps by addressing suicide within a social and historical context. In contrast to psychopharmacology and psychoanalysis, her work considered the individual as part of a community. She broke down the suicide rate in seventy-two Chicago communities and argued disorganization is the fundamental driver of suicidal impulses. Cavan listed unemployment and economic failure as her first example.[14] Later researchers expanded on her findings. For example, Schmid (1928), Porterfield (1949), and Sainsbury (1955) used community-based statistical analysis of mortality rates to reach similar conclusions. All members of the Chicago school of sociology, these researchers focused on the role of disorganization in urban life and death.

This wave of suicide research post-Durkheim found that the level of isolation was a fundamental driver of suicide. Yet, theorists in the latter half of the 20th century contradicted these claims. For example, Gibbs and Martin (1964) argued that social conflict rather than integration would drive the suicide rate while Douglas (1967) questioned the validity of any quantitative research on suicide as official suicide statistics are notoriously unreliable.[15] Today, many deaths are classified as "violence from unknown intent" even when it is clear that they were most likely suicides. However, this reporting of mortality and self-inflicted death has changed over the past century.

Unlike other violent crimes, the perpetrator of suicide is not available for comment after the act, and it can be difficult to determine if deaths were premeditated or accidental. Did someone leave a gas stove on with suicidal intent, or did they just forget to turn it off? In other

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[14] Ruth Shonle Cavan. 1937. *Suicide.* http://archive.org/details/in.ernet.dli.2015.221809. 327.
[15] Wray, Matt, Cynthia Colen, and Bernice Pescosolido. "The Sociology of Suicide." *Annual Review of Sociology* 37 (2011): 505-28. http://www.jstor.org/stable/41288619.

cases, families may attempt to have the coroner rule a clear suicide as accidental. Reputation was not the only factor. Religious cemeteries often refused to bury suicide victims unless the act was determined to be a bout of temporary insanity. Additionally, many of these studies lacked individual demographic information as vital statistics vary widely in providing age, gender, and race over time and can be flawed. More rigorous "psychological autopsies" from coroners are too expensive for widespread adoption.[16]

In his monograph *Self Destruction in the Promised Land*, behavioral science scholar Howard Kushner raised these issues and commented that, as economic circumstances change, the most affected people often do not take their own lives: "Those who have emphasized economic fluctuations, such as the Great Depression, as having been responsible for increases in the incidence of suicide have failed to explain why some people, who suffered more economic losses than others, did not commit suicide."[17] As Kushner astutely noted, suicide statistics can be an unreliable source of data for explaining individual choices. Exploiting the variation in state suicide rates and unemployment over some time can provide a coefficient to show the change in per capita mortality due to aggregate economic conditions. However, it fails to understand the individual's choice and how this is influenced by widespread financial trends.

The other fundamental issue with suicide rates is that they likely disproportionately underestimate African American suicides. Recent research suggests that a majority of unclassified deaths are suicides. This could lead the suicide rate to be understated by over a third. However, this rate of classification is not equal among demographic groups. Kaplan, Adamek, and Johnson (1994) and Rockett et. al. (2010) both suggest that African American deaths were at

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[16] Kushner, Howard I. c1989. *Self-Destruction in the Promised Land :A Psychocultural Biology of American Suicide.* 68-69.

[17] Kushner 69-72

least two times more likely to be classified as undetermined than white deaths. Using data from the National Violent Death Reporting System (NVDRS) from 2005 to 2008, Huguet, Kaplan, and McFarland found that the African American suicide rate was much lower than those of other races but that African American deaths were more likely to be classified as an underdetermined cause. They discussed how this could be a difference in perception of mental health issues in the African American community or a structural issue where Black deaths were not investigated as thoroughly or as often.[18]

This is not a new issue. A study from 1968 to 1979 of New York City medical examiner records found that the official Health Department underestimated Black suicide by about 80% and white suicide by 42-66% as they only included "definite suicides" in official suicide rates and excluded "assigned suicides."[19] If modern data is still affected by a structural misclassification of Black deaths, then researchers should be even more skeptical of African American suicide rates from the Great Depression in the middle of Jim Crow.

The unreliability of official suicide statistics and rates is the "original sin" of research on the connection between the business cycle and suicide. Yet this has not stopped the correlation from being a commonly researched topic. A 2011 article in the *American Journal of Public Health* analyzed the relationship between the national unemployment rate and suicide rates by age group from 1928 to 2007. Luo et al. (2011) found that, for people aged 25 to 64 over this period, suicide rates increased during economic contractions but there was not a statistically significant increase during boom times. This was in contrast to Durkheim's analysis of

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[18] Huguet, Nathalie, Mark S. Kaplan, and Bentson H. McFarland. 2012. "Rates and Correlates of Undetermined Deaths among African Americans: Results from the National Violent Death Reporting System." *Suicide & Life-Threatening Behavior* 42 (2): 185–96. https://doi.org/10.1111/j.1943-278X.2012.00081.x.

[19] Warshauer, M E, and M Monk. 1978. "Problems in Suicide Statistics for Whites and Blacks." *American Journal of Public Health* 68 (4): 383–88.

nineteenth-century financial undulations which found any digression from the mean to increase suicide. One issue of Luo et al (2011) is that the study only looks at the national level. Additionally, the researchers use a century of vital statistics data without accounting for changes in vital statistics reporting over this period.[20]

Many other academics in epidemiology have considered suicide risk and unemployment at the individual level. While sociologists and economists primarily consider aggregate evidence and population-level trends, epidemiologists and doctors look at suicide by examining individual cases. In this literature, researchers have considered the correlation between economic indicators and suicide and found that there are demographic traits and economic circumstances that increase an individual's likelihood to commit suicide. For example, men, the elderly, and white Americans are all at increased risk of suicide.[21]

One of the most prevalent variables studied by epidemiologists is unemployment. Blakely et al. (2003) looked at age groups or cohorts in New Zealand over three years to find the causal impact of unemployment on the individual. The researchers found that compared to people with jobs, unemployment was related to doubling or tripling the risk of suicide for each participant. This was through two mechanisms. The first was unemployment confounded or increased the effect of existing mental illnesses. The second was that losing one's job decreases one's capacity to deal with stressful life events. This effect was greatest in magnitude for young and middle-aged men.[22]

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[20] Luo, Feijun, Curtis S. Florence, Myriam Quispe-Agnoli, Lijing Ouyang, and Alexander E. Crosby. 2011. "Impact of Business Cycles on US Suicide Rates, 1928–2007." *American Journal of Public Health* 101 (6): 1139–46. https://doi.org/10.2105/AJPH.2010.300010.

[21] Shields, Lisa B. E., Donna M. Hunsaker, and John C. Hunsaker. 2005. "Trends of Suicide in the United States During the 20th Century." In Forensic Pathology Reviews, edited by Michael Tsokos, 307. Totowa, NJ: Humana Press. https://doi.org/10.1007/978-1-59259-910-3_10.

[22] Blakely, T. A., S. C. D. Collings, and J. Atkinson. 2003. "Unemployment and Suicide. Evidence for a Causal Association?" *Journal of Epidemiology & Community Health* 57 (8): 594–600. https://doi.org/10.1136/jech.57.8.594.

Similar results were replicated in the United States by Kposowa (2001) who found unemployment is strongly related to suicide but that the relationship in men decreases over time and is strongest in the first three years after initial unemployment.[23] These studies suggest that unemployment has a causal effect on increasing the risk of suicide in future periods but that the impact is not permanent as people recover from job losses over time.

One of the most recent contributions to the literature on suicide and the economy is Angus Deaton and Anne Case's 2020 book, *Deaths of Despair and the Future of Capitalism*. This is a return to relying on official statistics, but the authors take a broader view of deaths related to depression or adverse conditions by considering "deaths of despair". Deaton and Case aggregated statistics since the mid-twentieth century on drug overdoses, liver failure, and suicide mortality as they are likely all related to mental health issues. Since this broader category would include people with suicidal intent that may not be considered suicides in official statistics, they address the reliability of mortality rates in a novel way.

Much of the monograph analyzed the recent surge in deaths of despair of those without a college degree since 1980 through robust and convincing graphical analysis.[24] The surge in self-inflicted deaths for those with a high school education or less is a new trend that arose as wages stagnated in the 1970s. In contrast, Durkheim theorized people with a college degree were more likely to take their own lives than their working-class counterparts. He argued the wealthy were more likely to blame themselves for economic downfall while lower members may blame society or the government.[25] These findings may seem conflicting but both Durkheim's and

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[23] Kposowa, A. J. 2001. "Unemployment and Suicide: A Cohort Analysis of Social Factors Predicting Suicide in the US National Longitudinal Mortality Study." *Psychological Medicine* 31 (1): 127–38. https://doi.org/10.1017/s0033291799002925.

[24] Case, Anne, and Angus Deaton. *Deaths of Despair and the Future of Capitalism*. Princeton: Princeton University Press, 2020. 60, 94.

[25] Durkheim 208-209

Deaton's and Case's arguments are well supported by contemporary data. The relationship between suicide and class fundamentally changed in the mid-twentieth century but is unclear when that shift particularly occurred and which explanation better fits the Great Depression mortality statistics in the interim.

Suicide mortality during recessions differs not only by class but also race. When Deaton and Case addressed the difference between white and Black deaths, they noted that increasing deaths of despair over the past 25 years was largely contained to white mortality as Black suicide and overdose deaths did not have the same exponential increase. In 1897, Durkheim noted that Black suicide rates were far lower than those of whites. Deaton and Case cited this in their research and argued that there is "no widely accepted explanation for the difference."[26] They wrote that suicide and overdoses today are largely impacted by changes, specifically decreases, in living quality whether due to debt or unemployment. Since the African American community in the United States has been discriminated against since the nation's founding, some propose there has been little opportunity for the unemployment rate or financial circumstances to vary to the same degree as white Americans. This argument seems contrived at times and fails to fully explain the difference in suicide rates by race. Additionally, Deaton and Case did not analyze the reliability of the official mortality rates on which they base the fundamental argument as they spent more words explaining a related political cartoon.

Case and Deaton argued that deaths of despair in the current era are a pressing public health emergency. Given the COVID-19 crisis that began in March 2020, the role of federal and state governments in changing suicide rates has only become more pertinent. On March 23, 2020, former President Trump claimed that suicides would exceed deaths attributed to

[26] Case and Deaton 67

coronavirus if the United States did not immediately reopen: “We have jobs, we have — people get tremendous anxiety and depression, and you have suicides over things like this when you have terrible economies. You have death. Probably and — I mean, definitely would be in far greater numbers than the numbers that we’re talking about with regard to the virus.”[27] With over half a million Americans dead as of February 2021, this statement is false.

Yet, the underlying question of how the economic crisis and social isolation attributed to the pandemic would influence suicide is still relevant. Researchers across the globe are currently considering how lockdowns may have affected cohort-specific suicide mortality. Preliminary research in January 2021 analyzed excess mortality in the later months of 2020 and found that pandemic and the subsequent recession were associated with a 10% to 60% increase in deaths of despair.[28] These findings are not peer-reviewed and have yet to be replicated. Until further research can be done, there is a period with a wealth of data on changes in federal government spending and fluctuating mortality to which scholars can turn: The Great Depression.

[27] The White House. “Remarks by President Trump, Vice President Pence, and Members of the Coronavirus Task Force in Press Briefing.” Accessed July 18, 2020. https://www.whitehouse.gov/briefings-statements/remarks-president-trump-vice-president-pence-members-coronavirus-task-force-press-briefing-9/.

[28] Mulligan, Casey B. 2021. “Deaths of Despair and the Incidence of Excess Mortality in 2020.” w28303. National Bureau of Economic Research. https://doi.org/10.3386/w28303.

Suicide During the Great Depression

Among historians, there is significant debate about when the Great Depression ended. Some say 1933 when unemployment hit its peak and then began to fall. Others argue 1936. A few claim 1941 with the US entry into WWII. However, there is a broad consensus that it started in 1929. As the official recorder of business-cycle contractions and expansions, the National Bureau of Economic Research (NBER) dates the contraction that became the Great Depression to August 1929 as that was the peak year of the previous economic expansion of the Roaring Twenties.[29] This was the month where GDP growth ended and is an inflection point where overall economic conditions and output began trending downwards.

There is still scholarly debate over which macroeconomic forces drove this decline in GDP. In a 1994 lecture presented at Ohio State University, the future Chair of the Federal Reserve, Ben Bernake, claimed empirical evidence supports the theories that monetary contraction and wealth inequality were fundamental causes of the Great Depression.[30] Some proponents of the Great Man theory of history such as Warren Sloat in his book *1929: America Before the Crash* argued that speculative elites and businessmen overinflated the value of the stock market through backroom deals that eventually led to a market correction.[31] Likely, it was a combination of individuals' actions that led to a precarious financial system where worldwide feedback loops connected to the gold standard and monetary policy prompted international deflation and a decrease in aggregate demand. These factors combined with a hands-off policy

[29] "US Business Cycle Expansions and Contractions." n.d. NBER. https://www.nber.org/research/data/us-business-cycle-expansions-and-contractions.
[30] Bernanke, Ben S. 1994. "THE MACROECONOMICS OF THE GREAT DEPRESSION: A COMPARATIVE APPROACH." The Ohio State University, May 16. 37-38.
[31] Sloat, Warren. 1979. *1929, America before the Crash*. New York: Macmillan.

approach under President Hoover caused the American economy to fall into the worst crisis in its history.

A simpler and popular view of history is that the Great Depression began with the stock market crisis in October 1929. This was the event that exposed many of the flaws in the economy, although it may not have expressly caused the broader national economic downturn. In the fourth week of October 1929, the stock market began to fluctuate with a high trading volume on Monday, October 21 causing a dip. Stocks then climbed 5.6% on Tuesday. Trading was again high on that Wednesday. Then on October 24, "Black Thursday" occurred where stocks closed 6.38 points down from Wednesday's high and New York Stock Exchange easily broke trading volume records. The stock market stabilized over the weekend and President Roosevelt assured the country that this was just a blip.[32]

Yet on the next Tuesday, October 29, the crash wiped out about a quarter of the Dow Jones Industrial Average's value. In his book *The Great Crash*, economic historian John Kenneth Galbraith wrote Black Tuesday "was the most devastating day in the history of the New York stock market, and it may have been the most devastating day in the history of markets." When considering how economic fluctuations impact suicide, it may be more important to consider this "popular" view of the economy as average citizens' expectations and confidence in the economy are likely more correlated with fluctuations in the stock market than the interest rate.

When most people think of suicide during the Great Depression, they picture bankers jumping out of their Wall Street offices. The idea that the ambition that brought them to these

[32] Kilborn, Peter T. 1979. "From Binge to Bust: The Legacy of the Crash." *The New York Times*, September 23, 1979, sec. Archives. https://www.nytimes.com/1979/09/23/archives/from-binge-to-bust-the-legacy-of-the-crash-binge-to-bust-the-legacy.html.

New York City high rises and then massive losses led them out their corner office window is pervasive. Much of this perception was driven by the writings of actor and newspaper columnist Will Rogers.

Rogers began his career touring the vaudeville circuit where he displayed his Guinness World record winning lassoing ability to audiences worldwide. After achieving fame in these circles, he turned to the silver screen, taking roles in silent and talking films. Rogers eventually starred in 71 titles and was voted the most popular male actor in 1934, shortly before his 1935 death in an Alaskan plane crash. Yet, his most substantial legacy may be the approximately two million words he wrote from 1916 to 1935 in six books, hundreds of magazine articles, and thousands of columns syndicated in over five hundred newspapers.[33]

The writing that brought him fame and influence was that of his Daily Telegrams. *The New York Times* began publishing his column in the summer of 1926 which he wrote in the afternoon, telegraphed to his editor that evening, and then was published each morning and reprinted in syndication. Rogers wrote these short, pithy "Letters to the Editor" until his tragic death to provide context and humor to current political and economic news. On October 25, 1929, the morning after the foreshock of "Black Thursday", he wrote in his daily dispatch, "When Wall Street took that tailspin, you had to stand in line to get a window to jump out of, and speculators were selling space for bodies in the East River."[34]

As he traveled the country frequently and left New York the next morning to return to California, Rogers continued to mention Wall Street in columns the following week while also discussing the plights of farmers, the hot-button issue of paying college athletes, and the safety

[33] Rogers, Will. n.d. "Writings." Willrogers. Accessed March 4, 2021. https://www.willrogers.com/writings.
[34] Rogers, Will. 1929. "Will Rogers Says New York Has Had a 'Wailing Day.'" *The New York Times*, October 25, 1929.

of air travel. He again addressed the market crash directly on October 21, 1929: "There is one rule that works in every calamity. Be it pestilence, war or famine, the rich get richer and the poor get poorer. The poor even help arrange it."[35] He advised his readers to take less risk in investing; Rogers had most of his money in real estate on the Santa Monica coastline as he was slow to trust the bankers he was so quick to mock.[36] Though he was not personally financially affected by the crash, Rogers continued to write about the paradox of the Great Depression in the following years, shepherding the American public through economic contradictions.

Rogers was not the only columnist to comment on financiers' suicides; a member of the British parliament, Winston Churchill, was in New York City at the time writing a series of dispatches on the American people for the London readers of *The Daily Telegraph*. For his fourth installment, he wrote about the aftermath of seeing a man jump to his death and land outside his Fifth Avenue hotel window. This unverifiable anecdote likely further spurred international discussion of the New York City suicide crisis after the crash. Churchill linked this tragedy by explaining to the Brits the uniquely American practice of widespread stock-market investment:

> "The housemaid who makes your bed is a stockholder on margin. Workmen of every class, brain or hand, the chauffeur, the train conductor, the railwayman, the waiter, all have their open accounts, and so very often have their wives. … A speculative public … is of course utterly novel. Nothing approaching it has been seen or dreamed of since the world began. … [I]t is easy to buy shares, few or

[35] Rogers
[36] Linneman, William R. 1984. "Will Rogers And The Great Depression." *Studies in American Humor* 3 (2/3): 173–86.

> many on margin, as it is to buy a pound of tea, and far easier than to buy a motor car or a gramophone upon the installment system."[37]

He saw this speculation as a strength as it led to a higher propensity to consume and an ability to increase aggregate demand in the United States, a fundamental component of GDP.

Yet writing on December 9, 1929, weeks after Black Tuesday, Churchill astutely noted the tragedy that occurs when this system of investment and consumption suddenly comes crashing down. He wrote, "And the women said to their husbands: 'Sell out at all costs,' 'Let it all go,' 'You have your job or your salary,' 'Let's keep the home." And the great popular stores said: 'Halve the orders to be given out for Christmas and the spring.' And several million families decided to make the old car do for another year."[38] In this short parenthetical, Churchill wryly described the economic forces that turned a dip in the stock market into a demand shock into an unemployment crisis. While over-simplified, this is a common understanding of how the 1930s turned into the Great Depression. However, Churchill did not have the benefit of hindsight, but rather saw the events of October 1929 as a "passing episode" that would soon end. He never imagined a crisis that would spiral internationally due to monetary and end up affecting his future role as Prime Minister.

Churchill and Rogers are just two members of the press Galbraith claimed popularized the idea of a suicide epidemic in 1929 New York. In his history of the crash, Galbraith described the "suicide wave" as "part of the legend of 1929" and went so far as to say that "there was none."[39] He claimed the suicides that did occur during the final months of 1929 were wrongly attributed to financial distress and that the victims rarely jumped out windows. In listing United

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[37] Churchill, Winston, M.P. 1929. "Fever of Speculation in America." *The Daily Telegraph*, December 9, 1929. The Telegraph Historical Archive.
[38] Churchill
[39] Galbraith 133

States vital statistics, he pointed out the steadily rising suicide rate before 1929 and showed that the peak did not occur until 1932. Galbraith even went so far as to note that “the number of suicides in October and November was comparatively low [...] In only three other months -- January, February, and September -- did fewer people destroy themselves. During the summer months, when the market was doing beautifully, the number of suicides was substantially higher.”[40] These points have been reiterated and cited in many popular and scholarly writings on suicide in the decades since Galbraith’s work has been published but rarely criticized. As many research articles and news sources still use Galbraith’s 1955 book as the final arbiter of the economic history of the financial crash, few have reexamined the statistics as they are now widely available on the internet to see if the suicide rate was truly a myth created by the press based off personal anecdotes and satirical quips or the beginning a larger trend in American mortality.

To address Galbraith’s first point that suicides decreased in October and November of 1929 compared to the summer, Figure 1 below charts the number of suicides nationwide each month from 1927 to 1937. The dotted line marks October 29, 1929--Black Tuesday.

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[40] Galbraith 134-135

Figure 1: Suicides from 1927 to 1937

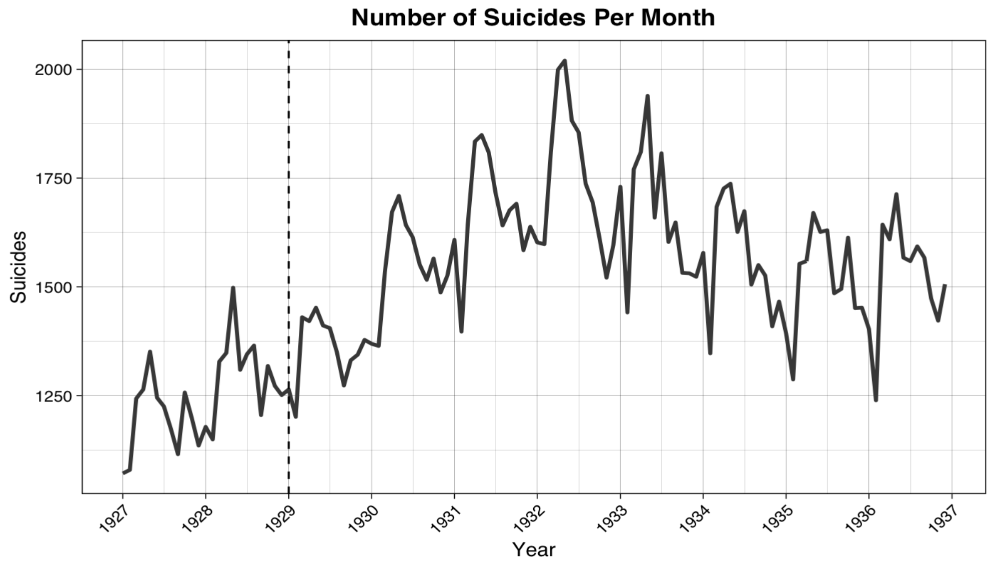

Figure 1 demonstrates there is a clear seasonality to suicide. It typically peaks in the summer and goes down in the winter. For almost every year on this graph, there is a sharp drop in suicides from November to January. This is not true for 1929. Galbraith makes a false equivalence by comparing the city's suicides in the summer when the market was booming to those in the winter of 1929.

Any time series analysis that analyzes the impact of shocks in monthly or quarterly data needs to take into account two considerations: seasonality and long-term trends. First, data like mortality and the business cycle have clear seasonal trends. For example, fourth-quarter GDP is usually higher than earlier in the year as people go holiday shopping and spend more money. This is why government economists usually only discuss "seasonally-adjusted" economic indicators so that policymakers can compare apples to apples.

The difference in suicides year-over-year was a contemporaneous question after the crash. On November 14, 1929, in the *New York Times*, New York City's chief medical examiner stated that there were fewer suicides from October 13, 1929, to November 13, 1929, in

Manhattan compared to the year prior.[41] As he compared equivalent weeks, the examiner addressed the seasonality issue. However, he only broke down the data for two weeks after the crash and could not fathom the long-term impact of the financial crisis.

After considering seasonality, a researcher must determine if there are any trends in the sample over time. Phenomena may appear correlated at first glance if they both trend in the same direction over time. However, to determine causality, a researcher may be better off considering the first difference or percent change between periods. This shows how mortality may deviate after a shock to the system. In formal terms, a time series must be stationary for an ordinary least squares regression to be the best linear unbiased estimator. Otherwise, estimation strategies like OLS may lead to spurious results.

From 1926 to 1932, the suicide rate increased. Figure 2 shows the national suicide rate per 100,000 residents over this period. After consistently rising since 1927, it reached its peak in 1932 and then continued to fall and reverted to the mean for the rest of the 1930s. The 1932 national suicide rate of 17.4 deaths per 100,000 was a historic high.

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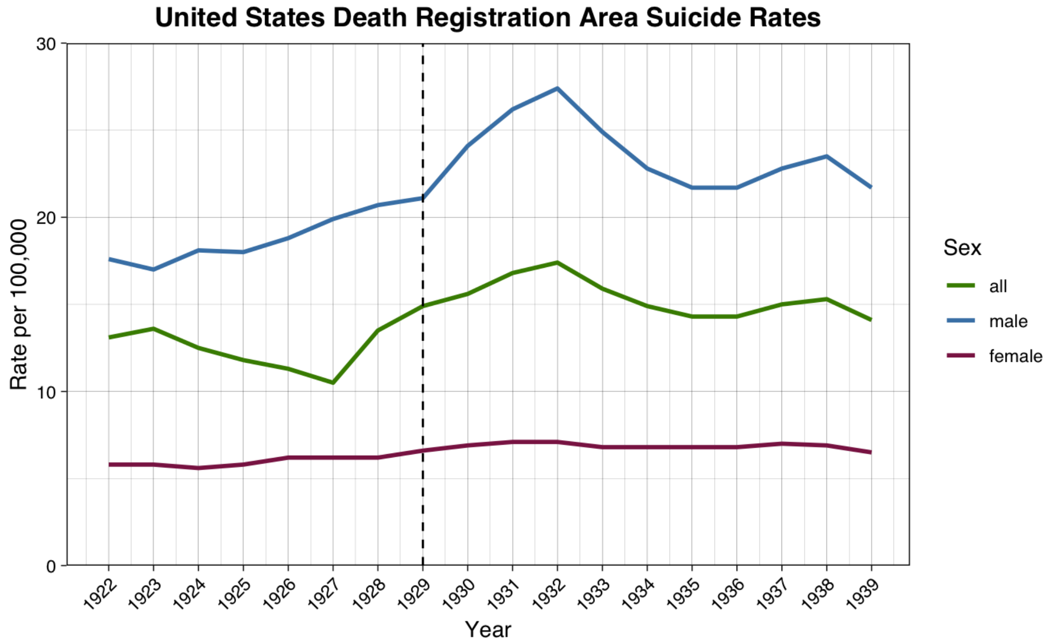
[41] *The New York Times*. 1929. "CITY'S SUICIDES FEWER.; Figures Refute Tales of Increase Owing to Stock Losses.," November 14, 1929.

Figure 2: DRA Yearly Suicide Rates[42]



These data represented in Figure 2 were compiled in the 1940s by the National Office of Vital Statistics for the United States death registration area (DRA). As previously discussed, the DRA did not include all 48 states until 1933, so readers should be skeptical of comparing year-to-year results. A state's addition to the DRA could fundamentally change the reported rate. In 1921, the DRA did not include Georgia, Indiana, Wyoming, Iowa, North Dakota, Alabama, West Virginia, Arizona, Arkansas, Oklahoma, New Mexico, Nevada, South Dakota, or Texas. By 1927, the DRA still excluded eight of these states.

Ekberg (1995) forecasted a backward projection of the national homicide rate given the geographic exclusions before 1933. He found that his estimated data series did not support previous findings of a rapid increase in homicide in the early twentieth century.[43] Future research

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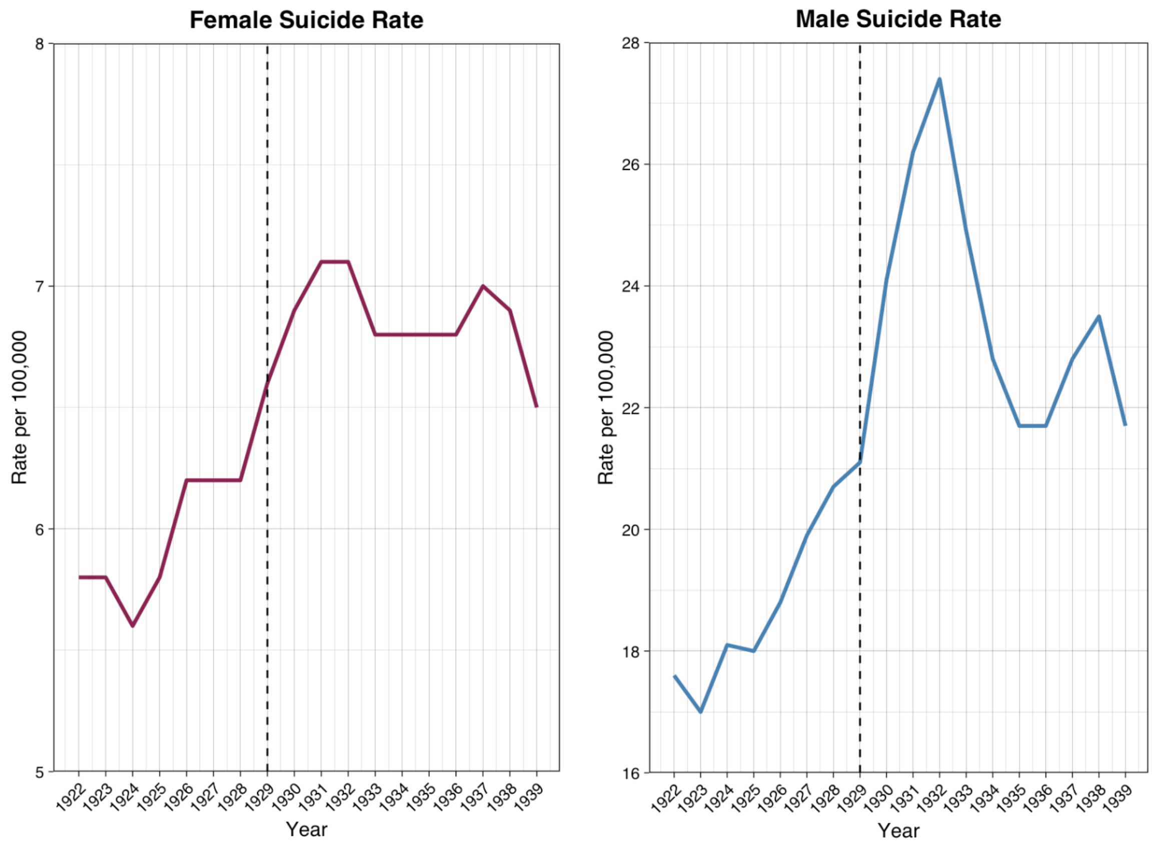
[42] Federal Security Agency. 1947. "Vital Statistics Rates in the United States, 1900-1940," 1053.
[43] Eckberg, Douglas Lee. 1995. "Estimates of Early Twentieth-Century U.S. Homicide Rates: An Econometric Forecasting Approach." *Demography* 32 (1): 1–16. https://doi.org/10.2307/2061893.

should similarly estimate the suicide rate using econometric techniques such as generalized least squares. Then, researchers could better compare annual statistics.

Given this substantial caveat, Galbraith appears to be initially correct. Working with the same data available to him in 1955, it appears that the crash did not greatly affect the national suicide rate. Rather, suicide was already increasing in America, and that trend continued until 1932. Yet, this national rate does not tell the whole story.

By decomposing vital statistics into male and female-specific rates from 1921 to 1940, two different stories emerge. On average, the suicide rate for men is three times that of women. While there was a slight rise in female suicides during the 1920s, peaking at a rate of 7.1 in 1931 and 1932, overall, the trend shows less variation and is smaller in magnitude than the male suicide rate. Since the male and female rates are from the same geographic area each year, comparing the rate of change between these two categories is more straightforward.

Figure 3: Suicide Rates by Sex



As shown in Figure 3, male suicides display much more variation after accounting for the difference in magnitude. As Galbraith noted, there is an overall upward time trend from 1923 to 1932. However, over this decade, there is a clear inflection point in 1929. The slope of the male suicide rate over time dramatically increases. The national and female suicide rates do not display this same change in course. However, one must note New Mexico and Nevada joined the DRA in 1929 which could affect the results. Nevada specifically had a very high per capita suicide rate. Yet the crude number of deaths in Nevada was comparatively low due to its small population and its addition fails to fully account for the 14% increase in the male suicide rate that year. Rather, the Great Depression and its fallout better explain the deviation in the male suicide rate.

Table 1 lists the yearly percent change in the male and female suicide rates in the years before and during the Great Depression. From 1924 to 1929 the male suicide rate grew about 4% on average. Then, from 1929 to 1930, the male suicide rate increased by 14.22%. This is a clear inflection point as the rate of change dramatically increased in 1929 and stayed elevated in 1930.

In comparison, the year with the greatest growth in the female suicide rate was from 1928 to 1929, primarily before the crash. There was still modest growth from 1929 to 1930 at a 4.55% increase in the estimated national female suicide rate. However, the female suicide rate has less variation overall as the modal change is zero percent and the fluctuations are not correlated with the business cycle. Table 1 demonstrates that only considering national mortality rates misses a major part of how the crash specifically influenced suicides.

Table 1: Percent Change in Suicide Rates

Year	**Female Percent Change**	**Male Percent Change**
1923	0.00%	-3.41%
1924	-3.45%	6.47%
1925	3.57%	-0.55%
1926	6.90%	4.44%
1927	0.00%	5.85%
1928	0.00%	4.02%
1929	6.45%	1.93%
1930	4.55%	14.22%
1931	2.90%	8.71%
1932	0.00%	4.58%

There are several reasons why the male suicide rate would have been more affected by economic changes than the female suicide rate. The first is that men were the primary breadwinners as women performed largely unpaid labor as mothers and homemakers or had limited employment, traditionally before marriage, during the 1920s and the Great Depression. This means that men were more likely to be affected by the financial stress of unemployment. Losing one's position increased not only a man's economic vulnerability but also his family's. An unemployed American also lost his identity as a worker and provider alongside the social connection of employment. Historic research in sociology and modern analysis in epidemiology suggests that this greatly increases suicide risk.

Figure 4 plots the unemployment rate from 1929 to 1930 and shows how it exploded to historic highs by 1932. This change roughly correlates with the increase in suicides over this period. However, there is an interesting pattern where the change in male suicide rate growth began at the end of 1929 while unemployment did not begin to truly spike until the summer of 1930. This suggests there may be some connection to the crash of late 1929 to suicides that predates the later fallout in the Great Depression related to widespread unemployment, foreclosure, and poverty. The male suicide rate also peaked in 1932 while the unemployment rate did not reach its high until 1933 as shown in Figure 4.

***Figure 4: United States Unemployment*[44]**

Another potential reason the economic crisis may have affected the male suicide rate more than the female one relates to the changing nature of women's labor force participation during these decades. There is evidence to suggest that women's paid employment increased during the Great Depression. As their husbands lost their jobs, many married women entered the workforce during the 1930s in a continuation of a larger trend through the early twentieth century. In 1930, 11.7% of married women were in the workforce, which included both those employed and unemployed women searching for work. In 1940, this number was 15.3%. With this nearly 50% increase, married women then represented 35% of the female labor force compared to 29% a decade earlier.[45]

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[44] National Bureau of Economic Research. 1929. "Unemployment Rate for United States." FRED, Federal Reserve Bank of St. Louis. FRED, Federal Reserve Bank of St. Louis. April 1, 1929. https://fred.stlouisfed.org/series/M0892AUSM156SNBR.

[45] Bolin, Winifred D. Wandersee. 1978. "The Economics of Middle-Income Family Life: Working Women During the Great Depression." *Journal of American History* 65 (1): 60–74. https://doi.org/10.2307/1888142.

While all genders undoubtedly felt the financial strain of the Great Depression, unemployment was disproportionately a male issue as only about half of women were in the workforce at its start. Additionally, many married women obtained government jobs as teachers and librarians with low salaries but high purchasing power as massive deflation occurred throughout the crisis.

A later study of suicide rates and economic factors from 1940 to 1984 found a statistically significant decrease in the female suicide rate for both white and Black women as labor force participation increased. While the unemployment rate did seem to have a causal effect on the white, male suicide rate, this was not replicable for women.[46] Therefore, while it is important not to discount the effect of poor economic conditions on women's mortality when considering suicide, male rates are of more interest because they are more prone to change with business cycle fluctuations. From these aggregate statistics, one cannot draw a causal link between unemployment and self-inflicted death. But there is compelling evidence in these graphics and summary statistics that there was a change in both the seasonality and the time trend of suicide mortality for men in 1929 that Galbraith did not consider when he completely discounted the suicide wave "myth".

After understanding that some sort of the change in male suicide mortality occurred in 1929, then the next logical question is whether this was a nationwide problem or if it was centralized in one city, state, or region. Galbraith focused on New Yorkers, arguing that those residing in NYC likely had more contact with Wall Street and that the NYC suicide rate did not greatly increase from 1929 to 1930. This was an unfounded assumption.

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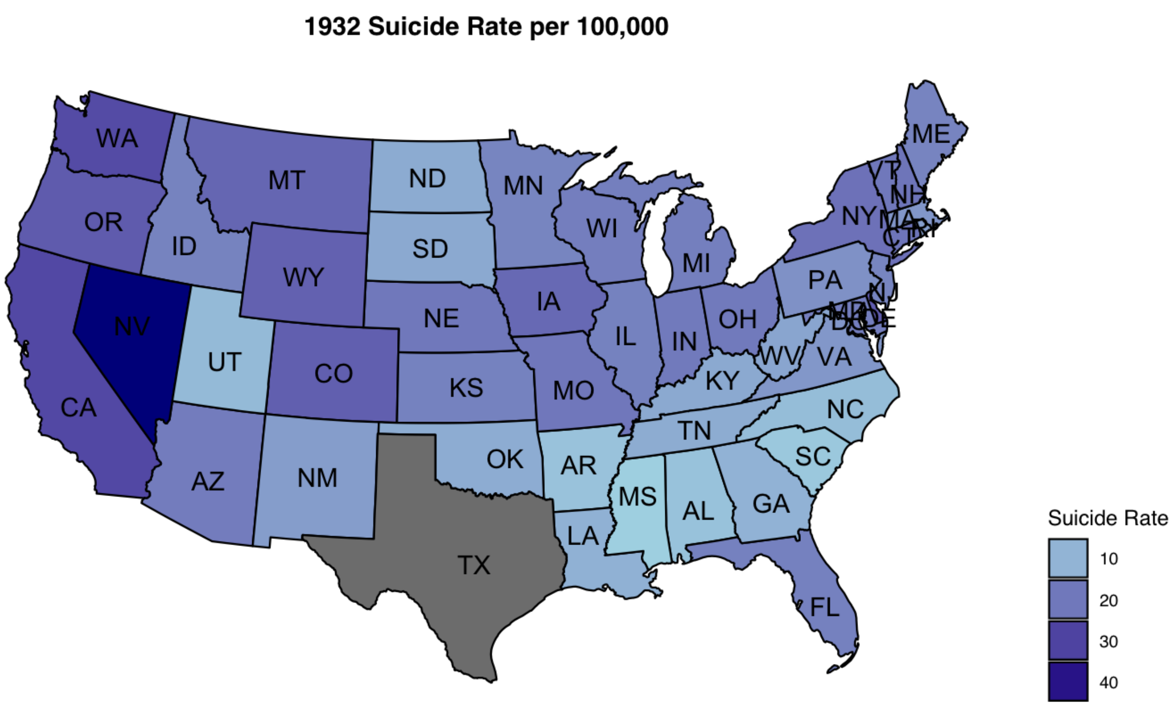
[46] Yang, Bijou. 1992. "The Economy and Suicide: A Time-Series Study of the U.S.A." *The American Journal of Economics and Sociology* 51 (1): 87–99.

It is unlikely that the true effects of this crash would have only influenced people in Manhattan. As described by Churchill, people from coast to coast invested in the stock market. More importantly, the crash's subsequent fall-out was felt nationwide. Additionally, returning to sociological theory, while shocks, including financial ones, can correlate with individuals' deciding to take their own lives, it is more likely that long-term destabilization and isolation can cause a sense of impossibility that may influence suicidal actions. As empirical evidence suggests, sudden unemployment is a more relevant factor to consider than the loss of wealth. Therefore, while Galbraith looked at the change in the suicide rate from 1929 to 1930, examining regional differences at the height of the Great Depression is a better strategy to estimate the full toll of the Crash on suicide mortality.

Figure 5: 1932 State Suicide Rates per 100,000



The map in Figure 5 shows the 1932 state suicide rates per 100,000. New York was tenth in the nation with a suicide rate of 21.1.[47] However, this was nowhere near the high of 46.2 suicides per 100,000 in Nevada for that year, which was a clear outlier, especially compared to the Mormon-dominated, neighboring Utah, or even California with a rate of 29 self-inflicted deaths per 100,000.

The Department of Commerce and Bureau of the Census also tracked suicide rates for major cities. The New York City suicide rate of 22.5 deaths per 100,000 was representative of that in New York State.[48] Yet the picture changes when one breaks this down further by borough. Manhattan has a suicide rate twice to almost three times that of adjacent districts at 41.7 suicides per 100,000.

Table 2: 1932 NYC Suicide Rates by Borough

Borough	**1932 Suicide Rate**
Bronx	17.1
Brooklyn	14.8
Manhattan	41.7
Queens	15.7
Richmond	25.1

According to the 1930 census, the Manhattan population was 1,867,312. Comparatively, Nevada's population was 91,058. Therefore, despite Nevada having a slightly higher overall suicide rate, there were far more deaths in the 22.82 square mile area of Manhattan in 1932 than

[47] US Department of Commerce, *Mortality Statistics* (1932) 45
[48] US Department of Commerce, *Mortality Statistics* (1932) 46

110,567 square mile area of Nevada in 1932.[49] Additionally, while NYC overall had a suicide rate that could be considered the middle of the pack, if one focuses only on Manhattan, that borough would be ranked second in large city suicides rate after Seattle (42.5) and before San Francisco (41.1) and San Diego (40.3), as generally large cities in the Pacific states saw the highest suicide rates.

Since many Wall Street workers lived in Manhattan, the borough's suicide mortality rate of 41.7 per 100,000 residents suggests that those geographically near the center of the financial breakdown may have been more affected by the crisis than the rest of the nation. However, since 1932 was the peak of the Great Depression and three years after the 1929 stock market crash, this data may suggest that unemployment and wealth losses have a larger effect in periods after the economic crisis first occurs.

The data on the Manhattan suicide rate greatly exceeding neighboring boroughs, other cities, and most states supports Galbraith's assumption that NYC would logically be the center of a financially motivated suicide epidemic. However, his time frame was too short. In 1932 there were 20,927 suicides in the United States registration area; 758 of them occurred in Manhattan.[50] If "Wall Street" can account for 3.6% of the suicides that year; where did the rest occur?

First, it is interesting to see where they did not occur. As evident in Figure 5, the South had lower suicide rates on average compared to the rest of the nation when suicide was at its peak in 1932. Mississippi had the lowest suicide rate that year at 6.1 deaths per 100,000. Some of this could be due to the rural/urban composition of the states as rural areas have lower suicide rates than urban areas in general. However, much of this variation was due to the demographic differences in the Southern states compared to those in the North. Specifically, in the 1930s

[49] "Total Population - New York City & Boroughs, 1900 to 2010."
[50] US Department of Commerce, *Mortality Statistics* (1932) 413-414

South, there was a higher percentage of Black citizens than in the North before the Great Migration.

In the early 20th century South governed by *Plessy v. Ferguson*, states separated everything by race: schools, lunch counters, and vital statistics. Table 3 shows the 1932 Black and white suicide rates in southern states.[51]

Table 3: 1932 Southern Suicide Rates by Race

State	White Suicide Rate	Black Suicide Rate
Alabama	11.4	1.9
Arkansas	10.0	2.3
Florida	24.1	4.9
Georgia	15.0	2.4
Kentucky	12.4	7.1
Louisiana	15.4	2.4
Maryland	21.2	6.8
Mississippi	9.7	2.5
North Carolina	11.5	2.3
Oklahoma	12.4	2.5
South Carolina	10.5	2.9
Tennessee	13.1	3.7
Virginia	18.4	4.2

[51] US Department of Commerce, *Mortality Statistics* (1932) 45

There are two potential explanations of why Black suicide rates were significantly lower than those of whites. The first is that there are societal reasons why African Americans are less likely to commit suicide. The second is that vital statistics fundamentally undercounted Black suicides. These are not mutually exclusive. Modern research concluded that vital statistics over the past fifty years have underestimated the African American suicide rate compared to the white suicide rate to at least a moderate degree. These issues were almost assuredly confounded in the Jim-crow-era Southern states.

Phenomenal works like *The Color of Money*; *Black Labor, and the American Legal System;* and *When Affirmative Action was White* describe how the Great Depression uniquely affected African Americans and how government policy instituted during the New Deal only exacerbated these inequities. As of 1940, about half of those classified by the Census as agricultural laborers were Black. Yet during the Great Depression, Black ownership of farms decreased while white farmers got federal aid that allowed them to purchase holdings that were larger and worth more than their agricultural counterparts. By 1935, the average value of a white farm was $5,239. The mean Black farm was worth $1,834. Yet living conditions were even worse for African Americans who worked as tenant farmers rather than owning the land. The average tenant family earned $73 per person in 1937, about one-eighth of the national per capita average of $604 per year. Additionally, over 40% of Black women in the 1930s worked outside of the home, primarily in domestic service as they made $5 a week for over seventy hours of work on average.[52]

A 1974 study into Black suicide rates by age from 1947 to 1967 in the post-war period found there was a statistically significant correlation between the unemployment rate and the

[52] Katznelson, Ira. 2005. When Affirmative Action Was White: An Untold History of Racial Inequality in Twentieth-Century America. 1st ed. New York: W.W. Norton, 22-32.

Black suicide rate. However, these estimates were less than a quarter of the estimated coefficients for the impact on white suicide rates. This could be due to measurement error due to unequal underreporting of African American suicides, but it may also suggest that Black suicide rates are less likely to vary with changes in the national unemployment rate.[53]

Figure 6: DRA Suicide Rates by Race[54]

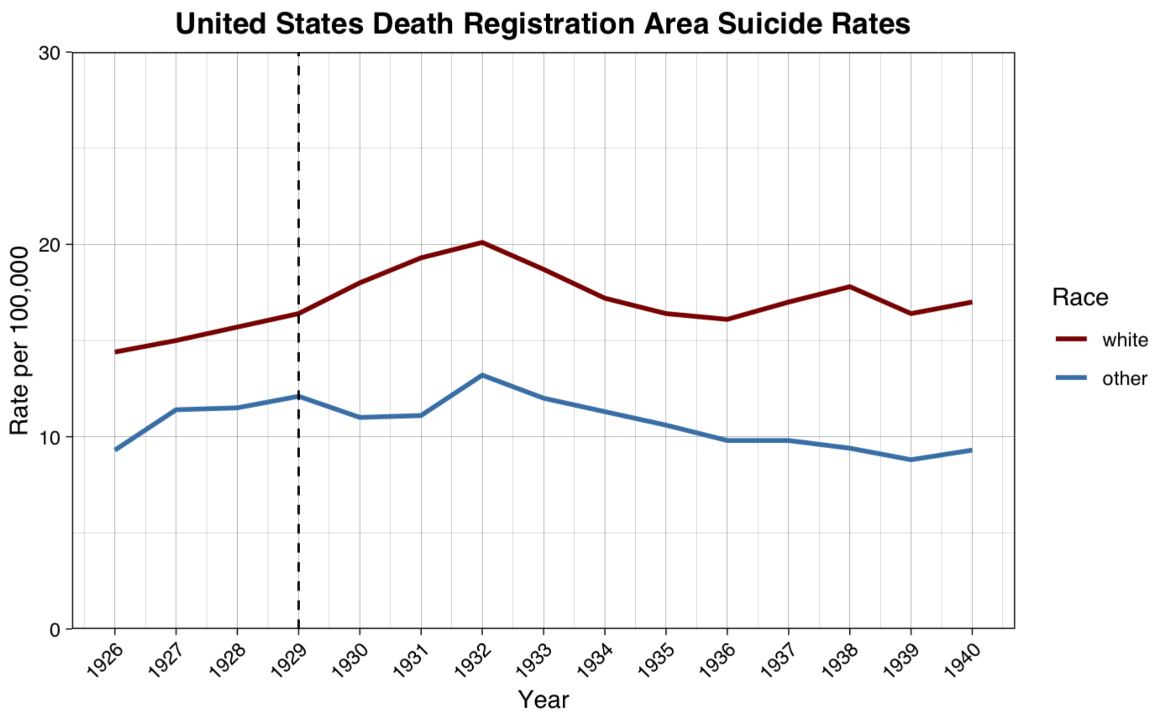


Figure 6 graphs the white and other races (primarily African American) suicide race for the DRA. Similar to the white suicide rate, the suicide rate for other races peaked in 1932. However, there was not an increase after the crash in 1929; rather, the suicide rate for non-white Americans dropped in the early years of the Great Depression. Jedlicka, Shin, and Lee (1977) analyzed Black suicide during the twentieth century and noted, "Of the major causes of death in the United States, suicide is the only one for which the rates are incontestably lower for blacks

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[53] Hamermesh, Daniel S. 1974. "The Economics of Black Suicide." *Southern Economic Journal* 41 (2): 193. https://doi.org/10.2307/1056729.
[54] Federal Security Agency. 1947. "Vital Statistics Rates in the United States, 1900-1940," 322.

than whites."[55] The peak in the "other races" suicide rate in 1932 supports the theory that economic conditions affect both white and Black Americans as both categories have largely parallel trends. Yet the magnitude of change is fundamentally different. One can note and compare the differences by race in suicide. A fundamental flaw of this paper is that there are zero African American obituaries included in the sample due to no examples provided in the initial newspaper search. This means that statistical findings from this thesis are limited to white Americans. Further research is needed to critically examine Black suicide over the twentieth century and present a testable theory to explain the difference.

When considering lower white suicide rates in the South, one potential reason for this is the regional variation in the severity of the Great Depression. While the Great Depression was a national problem, it affected some states more than others based on the main types of employment. Before the 1950s when the South and West became the Sunbelt, the South was primarily rural and disproportionately poor with a heavy focus on agricultural production rather than industrial investment. However, there is evidence that the decrease in manufacturing and retail employment that existed in the South was less severe and the recovery faster than in other parts of the nation. This was largely due to an existing trend where manufacturing employment had been growing over the decade.[56]

If a positive trend in manufacturing employment growth could potentially explain some of the lower white suicide rates of Southern states, then the employment composition can also explain why some states' suicide rates were higher. When considering industrial employment,

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[55] Jedlicka, Davor, Yongsock Shin, and Everett S. Lee. 1977. "Suicide among Blacks." *Phylon (1960-)* 38 (4): 448–55. https://doi.org/10.2307/274960.

[56] Rosenbloom, Joshua L., and William A. Sundstrom. 1999. "The Sources of Regional Variation in the Severity of the Great Depression: Evidence from U.S. Manufacturing, 1919-1937." *The Journal of Economic History* 59 (3): 736.

over 40 percent of workers in the Pacific and Mountain regions worked in the lumber industry. Out of all industrial sectors studied by Rosenbloom and Sundstrom, lumber suffered the most, proportionately, from 1929 to 1931. This was largely due to a collapse in construction during these years which led to higher unemployment in these regions. States on the West coast, cities specifically, had the highest aggregate suicide rates in 1932, and this variation in the magnitude of economic fallout could help explain the difference.

By examining national vital statistics, some key patterns emerge about the nature of suicide during the Great Depression. The South had lower suicide rates in 1932 than other regions due to the makeup of its economy and demographic characteristics. Nationally, women's suicides did not increase by the rate of change as men's, likely due to increasing workforce participation. Most importantly economic conditions most affected the suicide rates of white men in coastal urban areas. For this demographic group, the Crash of 1929 was the beginning of a fundamental change in previous trends of self-inflicted mortality. Galbraith's analysis of suicide in the wake of the crash did not capture the entire picture. Vital statistics allow researchers to examine how suicide changed during the Great Depression. However, they are fundamentally flawed and fail to answer why this shift occurred. To gather any causal insight into whether and which economic factors drove an increase in the white, male suicide rate during the Great Depression, one must consider the stories of those who took their own lives during this period.

Quantitative Evidence from Obituaries

Reporters in the early twentieth century were shameless. They hounded the widow, called up the coroner, and asked their detective friend for a copy of the suicide note. This bluntness and desire to include salacious details that would boost sales make obituaries during the 1920s and 1930s a unique resource. Today, many obituaries avoid discussing the act itself, but a search for the word "suicide" in death notices from 1927 to 1937 calls up hundreds of hits. Since there are fundamental flaws in vital statistics from this period as certain demographic groups' suicides were structurally undercounted, examining individual cases allows researchers to find patterns between finances and mortality regressions may miss.

In the ProQuest Historical Newspapers database filtered to include the major periodicals listen in Table 4, there are 469 obituaries of men and women, young and old who were reported as dying by suicide during this decade. This collection of newspapers is constrained by periodicals in the database. Future research should examine whether these patterns hold in a larger examination of periodicals. Specifically, another paper could solely examine the coverage of suicides in African American newspapers as that is a fundamental gap in this thesis.

Table 4: Obituaries by Newspaper

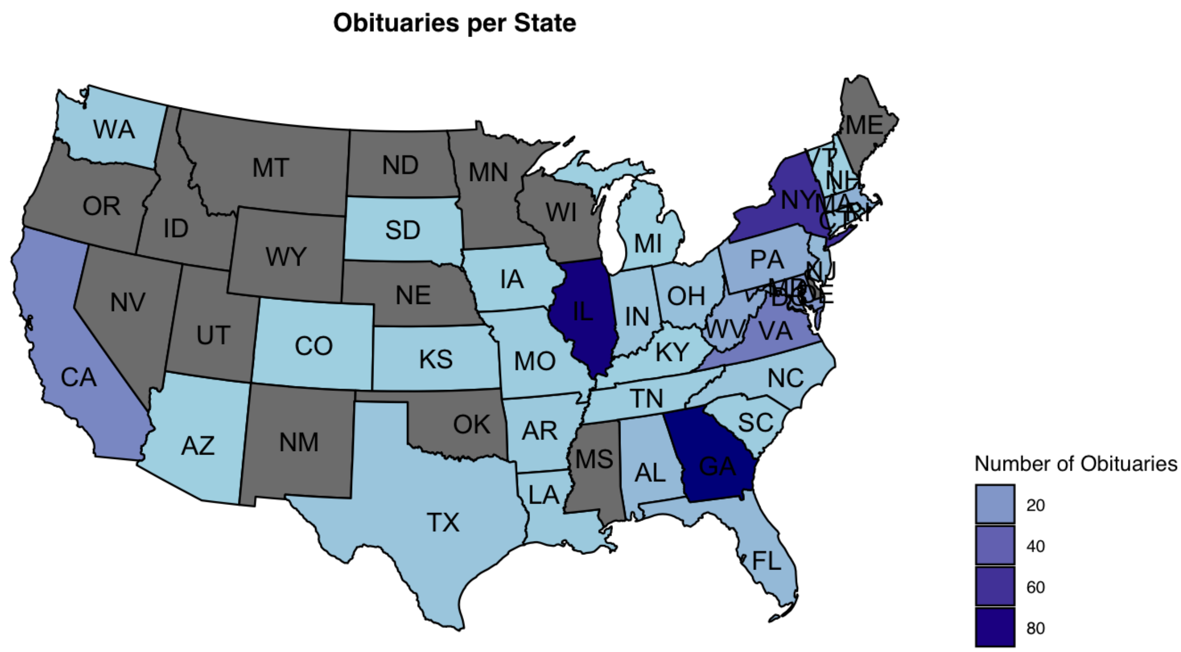
Newspaper	**Number of Obituaries**
The Washington Post	149
The Atlanta Constitution	126
The Chicago Daily Tribune	108
The New York Times	50
The Los Angeles	16

Times	
The Daily Boston Globe	12
Philadelphia Tribune	8

Despite the limitations described above, the obituary sample displays geographic variation as there are obituaries in all parts of the country. As most local papers covered primarily local obituaries, the states of New York, Georgia, Illinois, California, and the DC area have a disproportionate number of suicides recorded in this sample. One interesting facet was how each newspaper uniquely covered suicides. For example, there were more rural examples of suicides by farmers in *The Atlanta Constitution* as it published death notices from across the South. *The Washington Post* and *The New York Times* as publications with readership larger than their localities were more likely to publish obituaries of famous people across the nation alongside borough deaths. *The Chicago Tribune* covered the deaths of Midwesterners while *The Daily Boston Globe*, *Los Angeles Times,* and *Philadelphia Tribune* were comparatively geographically constrained.

Lastly, there are clear differences between the map in Figure 7 and that in Figure 5 that shows suicide rates by state. For places like the Mountain states and much of the South, it would be a herculean effort outside the scope of this thesis to gather a truly representative sample of suicide patterns nationwide. Rather, the scattered nature of obituaries over time provides interesting data and compelling anecdotes for initial takeaways about the relationship between economics and mortality during the Great Depression.

Figure 7: Suicide Obituaries by State



The histogram in Figure 8 shows that, while the average age of death in the obituaries sample is in middle age, the tail of suicides after 60 is longer than one would initially think in a time where the average life expectancy for men was 58. Before social security and modern medical advances, old age was often a time of poverty and pain. Consequently, the elderly had by far the highest suicide rate until the 1980s. Much of the spike in suicides in 1933 was driven by the action of adults over the age of 55. For this reason, one must closely consider the obituaries of these older, primarily white men to see why the Great Depression specifically affected this demographic group. The average age at death for the obituaries in this study was 44.62 with the youngest victim at 14 and the oldest 83.

Figure 8: Obituaries by Age

The sample was overwhelmingly male with only 21% female victims. Of those obituaries in the sample, 42% had some reason given for the individuals' actions. These reasons spanned from quotes in suicide notes to conjectures from homicide detectives. Of those 197 obituaries that did provide a suicidal motive, 55 or 28% of those mentioned financial distress. From the ProQuest Historical Newspapers sample, 42% of obituaries provided a speculative reason for the suicide.

Table 5: Difference in Obituaries with Reasons Provided

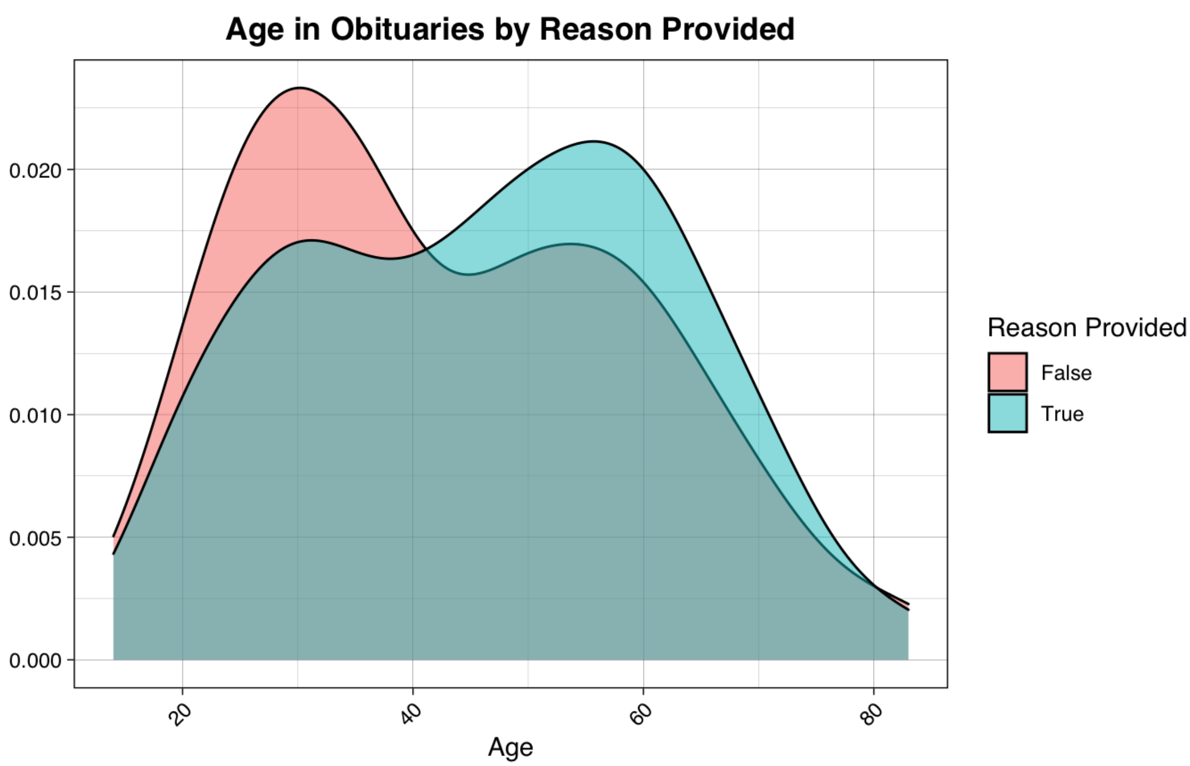
	No Reason	**Reason**	**T stat**
Age	43.1	46.5	-1.913*
Female	19.5%	23.3%	-1.0006
Gun	39.3%	42.6%	-0.71559

Jumping	6.6%	13.2%	-2.4554**
Gas	12.1%	11.1%	0.3217

10%*, 5%**, 1%***

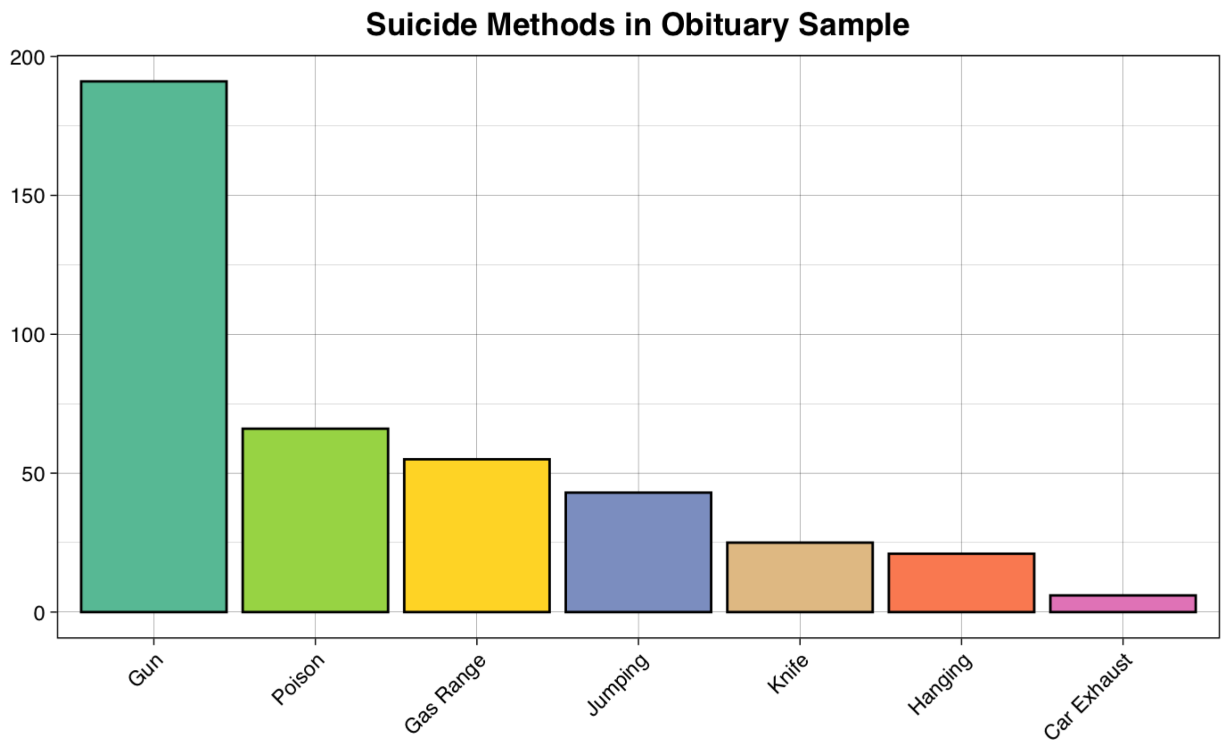
The first question to consider in this data is whether or not the obituaries that include a reason for the act are demographically similar to those lacking a reason. A t-test ran on the average ages of the group without a reason compared to those with a motive finds that there is a difference between the two samples, however, it is not statistically significant at the 5% level. The density plot in Figure 9 shows that those obituaries without a reason skew slightly younger than those with a reason provided. This makes sense as older people likely had larger social networks that would give a reporter information or would be higher status in their career than their younger counterparts.

Figure 9: Density Plot of Ages by Reason Provided



There was no statistically significant difference between the percentage of female victims as 19% of those without a reason were women compared to 23% women in the group with a motive. One major difference was that those who lacked a reason were more likely to have missing values of age or method. This makes sense and should not bias the analysis of those obituaries with the reasons provided.

Figure 10: Suicide Methods in Obituary Sample



Lastly, the modal method of committing suicide in the sample was with a firearm. This raises a legitimate question of whether or not there is a difference in methods used between the groups. With 41% of the sample overall using a gun to take their own lives, there is no difference between the groups with a reason and those not. This lack of difference in proportions was replicated for hanging and death by asphyxiation through gas inhalation.

However, there was a statistically significant difference in the two groups for those who committed suicide by jumping out windows. 13% of the group with reasons provided committed suicide by jumping compared to 6% of those without a reason provided. This is statistically significant at the 5% level. The difference makes logical sense as reporters may have been more likely to investigate suicides that occurred in public, such as through jumping out a window on the twentieth floor, rather than those in private such as deaths by firearm.

Once one understands that other than a slight skew in age and percentage committing suicide by jumping, there are few differences between those with a reason provided and those not, one can analyze Galbraith's claim about suicides after the crash. The relevant question is whether there is a statistically significant difference in those where the reason provided is financial distress versus those that cite family issues or ill-health as the primary cause for the act. For this study, financial motives include any mention of money, debt, employment, or foreclosure in an obituary when speculatively stating the cause of death.

Table 6: Difference in Obituaries with Financial Motives

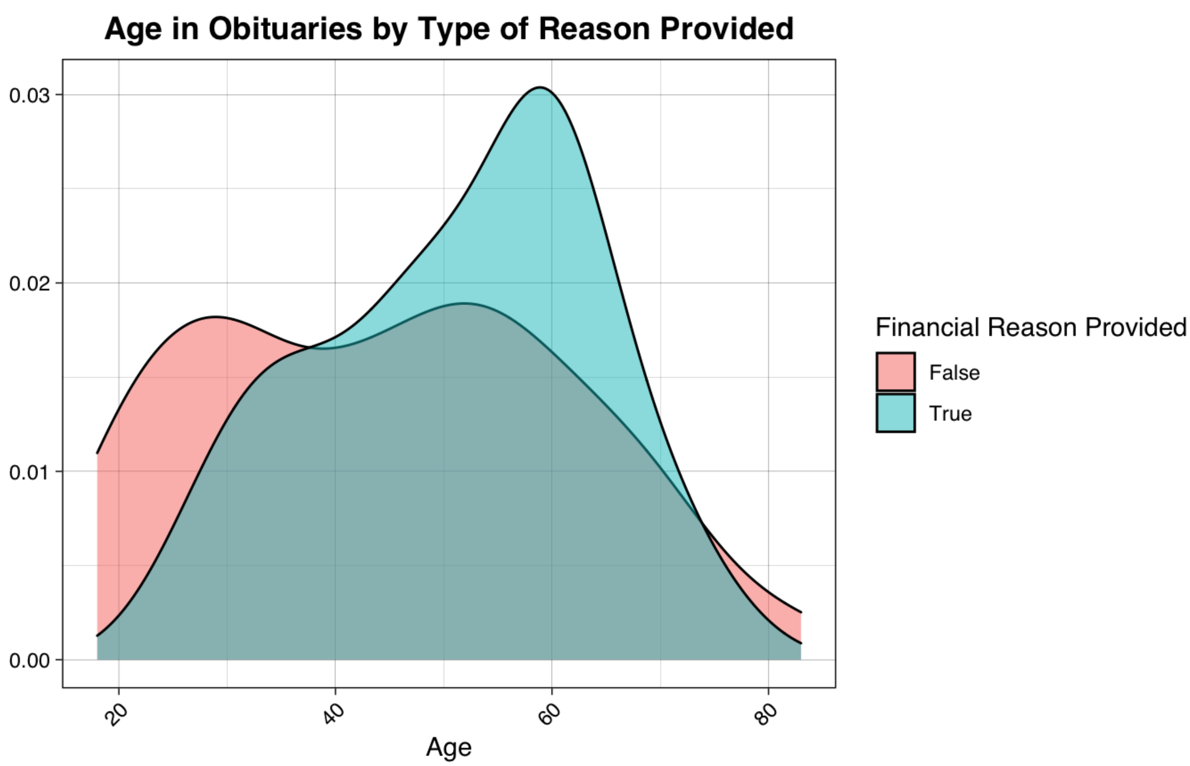
	No Financial Motive	**Financial Motive**	**T stat**
Age	44.8	51.2	-2.5013**
Sex	29.4%	17.1%	1.695*
Gun	42.0%	36.6%	0.61245
Jumping	16.8%	7.3%	1.7682*
Gas	10.1%	15.6%	-0.72939
New York	9.2%	9.65%	-0.094954

10%*, 5%**, 1%***

First, those who commit suicide due to financial distress are more likely to be men. The group of those who at least partially attributed their suicides to financial motives was 83% male compared to the 71% male group of those that did not find that. A t-test on means for the genders of these groups finds the difference to be statistically significant at the 10% level.

Additionally, the group in financial distress was older than those who had their death motivations as personal issues or ill-health. The average age of those in the finance group was 51.2 while those in the non-finance groups were 44.83. Six years may not seem like a large difference; however, this is statistically significant at the 5% level as we reject the idea that these groups have identical age distributions. The density plot comparing the ages of these two groups in Figure 11 shows the difference even more clearly. There is a clear spike around age 60 for those whose deaths were attributed to financial motives that do not exist in the other categories.

Figure 11: Density Plot of Ages by Type of Reason Provided



One unique feature of this data is that, while there was no statistically significant difference between the proportion of those who committed suicide with a gun or by gas, a significantly smaller proportion of people with financial explanations jumped out windows from

1927 to 1937. This is similar to Galbraith's findings in those very few people who died by suicide during this era jumped from a tall building, only 10% in the data. And as described above, this was likely an oversample of suicide deaths compared to the population by method since these deaths were inherently more public. However, this finding negates much of the popular belief that victims who committed suicide for financial reasons were more likely to jump.

One last myth this data does not support is that people from New York were more like to commit suicide for financial reasons than those from other states. Deaton and Case's landmark book on modern deaths of despair even mentioned "the famous images of bankrupt ex-millionaires" committing suicide during this period, agreeing with the basic premise of Will Roger's satirical letter to the editor in 1929 that the "suicide wave" was driven by Wall Street brokers.[57] If this were true, then one would expect a higher proportion of those in the financial motives bucket to be New Yorkers compared to the other categories. There is no evidence to support that hypothesis as the mean proportion of New Yorkers is almost identical for the finance and non-finance reason obituaries.

The obituaries themselves support the finding that Great Depression suicides were not localized to New York, "jumpers", or stockbrokers. In the months after the Crash, or the "slump" as it was contemporaneously known, there were other suicides that occurred outside the sample of obituaries that were included in other journalistic accounts of "The Jumpers of '29". A retired cigar maker in the Bronx killed himself by gas after immense stock losses on November 14. Wellington Lytle shot himself in Milwaukee hotel and wrote a note "dedicating his body to science, his soul to Andrew Mellon, and his sympathy to creditors." In the compilation of deaths,

[57] Deaton and Case 142

only one fits the stereotype of a Wall Street employee jumping off the top of a building, the case of Mrs. Hulda Borowski, a 28-year-old-clerk at a brokerage house.[58]

What Galbraith correctly gathered was that the stock market crash was not the driver of the drastic increase in suicides from 1930 to 1932. However, there are enough anecdotes to disprove a blanket statement that the suicide wave did not exist. By looking at the sample of obituaries that attribute death at least partly to financial distress, it becomes clear that older men were at the greatest risk of self-inflicted mortality during the Great Depression compared to other demographic groups. This is a novel factual finding, but to understand why the evidence supports this theory, one must participate in qualitative analysis of individual cases to find common trends. These similarities may provide greater insight and context than many econometric models by turning anecdotes into quantitative data, similar to epidemiological methods.

[58] "Clipped From The Rhinelander Daily News." The Rhinelander Daily News. December 10, 1929., Lowenthal, Bennett. "THE JUMPERS OF '29." Washington Post, October 25, 1987. https://www.washingtonpost.com/archive/opinions/1987/10/25/the-jumpers-of-29/17defff9-f725-43b7-831b-7924ac0a1363/.

Qualitative Evidence from Obituaries

At least two suicides were recorded on Black Tuesday due to financial losses. John G. Schwitzgebel shot himself in a Kansas City club and left a note that said, “Tell the boys I can't pay them what I owe them.” Julius Umbach was found in the Hudson River with notes in his pocket about needing to put up more money for margin on his stock positions and $9.20 in cash.[59]

One of the most famous suicides of this period was that of J.J. Riordan, a prominent New York Democrat and president of the County Trust Company. He committed suicide with a pistol from a teller’s cage at his bank on Friday, November 8. The news was not announced to the public until the next day at noon, after the bank closed for the weekend, to avoid a run on deposits. The police said he did it due to losses in the stock market; close friends ascribed it to ill health. The Catholic Church decided it was temporary insanity so he could be buried in consecrated ground. Galbraith described his suicide at length in his book after he claimed not many bankers took their own lives. Yet, Riordan does not provide a telling example for the reality of suicide during the Great Depression as his actual reasoning is unclear and he represents a much smaller part of a larger trend.[60]

Albert Russel Erskine is a more representative case of a businessman’s suicide during the Great Depression. Erskine was the President of the Studebaker Corporation, a premier car manufacturer based in South Bend, Indiana. He was born in Alabama in 1871 and got his first job as an executive with the American Cotton Company in New York. Before joining Studebaker as treasurer in 1911, he also worked for Yale and Towne manufacturing company and

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[59] Kilborn 1979

[60] “NEW YORK BANKER DIES BY OWN HAND: James J. Riordan, Close Friend of Al Smith, Shoots Self in Sister’s Home. NEW YORK BANKER DIES BY OWN HAND.” The Atlanta Constitution (1881-1945); Atlanta, Ga. November 10, 1929, sec. A.; Galbraith 136-137

Underwood Typewriters. He became president in 1915, and the company flourished during his early tenure as the demand for automobiles grew nationwide. In 1915, there were 24.77 vehicles per 1000 people in the United States. Two decades later in 1935, it had increased almost tenfold with 208.61 per 1000 people.[61]

Despite the fact he presided over much of this growth, Erskine's demise was ultimately due to Studebaker's failure under his leadership. Due to his public presence during this period, one can see how his outlook deteriorated from 1929 to 1933. In a public statement published in *the New York Times* on January 6, 1929, titled "Leaders Predict Good New Year: Say Prosperity will Continue through 1929 and Beyond", Erskine wrote:

> "For a number of reasons, I believe that the United States is about to enter upon the greatest business development of its history in both its domestic and foreign trade. … People of every section of the United States are filled with confidence in the future and are already investing their money and engaging in activities which beget prosperity."[62]

This statement was surrounded by like-minded pronouncements by leaders of the car industry such as Alfred Sloan and Walter Chrysler. The men were trying to instill stockholder confidence in the industry and profit from one of the longest bull markets in American history. However, Erskine's statement was one of the rosiest.

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[61] "A. R. Erskine, Auto Official, Kills Himself: ALBERT ERSKINE, AUTO EXECUTIVE, KILLS HIMSELF Ends Life with Gun in His South Fend Home." *Chicago Daily Tribune* (1923-1963); Chicago, Ill. July 2, 1933, sec. PART 1.

[62] By ALFRED P. SLOAN JR., President, General Motors.By WALTER P. CHRYSLER. President, Chrysler Motors. "LEADERS PREDICT GOOD NEW YEAR: SAY PROSPERITY WILL CONTINUE THROUGH 1929 AND BEYOND--EVIDENCE AND ANALYSES SUPPORT VIEW--CONFIDENCE IN HOOVER LEADERS PREDICT GOOD NEW YEAR BY C.W. NASH. PRESIDENT, NASH MOTORS COMPANY. BY ALBERT RUSSEL ERSKINE. PRESIDENT STUDEBAKER CORPORATION BY EDWARD S. JORDAN, PRESIDENT, JORDAN MOTOR CAR COMPANY. BY E.T. STRONG. PRESIDENT, BUICK MOTOR CO. BY LAWRENCE P. FISHER. PRESIDENT, CADILLAC MOTOR CAR CO." *New York Times*, Jan 06, 1929.

Facing the irony of this quote twelve months later on December 31, 1929, Erskine held on to his optimism: “1930 will be a far better year than 1929.”[63] He wrote that the stock market would not have a long-term effect on automotive demand and characterized the crash as a “debacle” and a “decline” rather than a cataclysmic event in American economic history. Then September of 1930 came. By then, it was clear that the economy was not in a temporary correction; there were structural issues that made selling cars difficult and buying them even harder. Erskine still held out hope:

> “In the boom, companies coasted along and with little effort produced dividends for the stockholders. [...] The automotive industry was overbuilt. Mediocre efforts reaped profits. [...] Then came the slump. [...] It was a lean spring and summer. The automobile business lost its surplus fat. And now this fall, we’re back doing business again.” [64]

While it is important to evaluate these words considering that he is a company president trying to raise the public’s expectations, he had reason to think this way. In the same article where he disavowed the industry’s coasting along, Studebaker announced a new feature in its cars called “freewheeling.” It was the first version of cruise control. The driver changed to second gear and “harnessed nature’s greatest force, momentum.”[65]

Erskine’s view was most likely the popular way of thinking in the business community. The “slump” was still a blip almost a year after the stock market crash. This is why Riordan’s suicide just one week after Black Tuesday does not best characterize the trend. Most bankers and financiers still had hope that their economic futures would rebound. Their predictions would turn

[63] ERSKINE, ALBERT RUSSEL. “AUTO TRADE TO RECOVER EARLY: Studebaker Chief Forecasts Speedy Rebound.” *Los Angeles Times* (1923-1995); Los Angeles, Calif. December 31, 1929.
[64] Foust, Hal. “Studebaker Head Optimistic [sic]; Sees Business Revival Ahead.” *Chicago Daily Tribune* (1923-1963); Chicago, Ill. September 14, 1930.
[65] ERSKINE, ALBERT RUSSEL. “AUTO TRADE TO RECOVER EARLY: Studebaker Chief Forecasts Speedy Rebound.” *Los Angeles Times* (1923-1995); Los Angeles, Calif. December 31, 1929.

out to be false as momentum took control and the crisis gained steam. Yet still, in January 1932, Erskine wrote, “The automobile industry entered 1932 in healthy condition” and praised his company’s efficiency and marketing efforts.[66] He expected 6,000,000 people to need to replace their cars that year. Yet the question on his mind was how many of them would have the means to do so. The answer: very few.

On March 18, 1933, the Studebaker Corporation was placed in receivership. Receivership is a way of recovering funds from a company in default by having a judge place creditors in charge of reorganization. It is a mechanism for troubled businesses to avoid bankruptcy. Studebaker’s profits had been declining since the Crash. In 1929, the company’s subsidiaries made a net profit of $11,928,261.17. In 1930, the figure was $1,540,202.29. And in 1930, the net profit was a mere $825,202.13. The receivership ended up bringing the company back into long-term financial solvency, but it was the breaking point for Erskine. He lost his position and president and a salary of $100,000 a year. Accounting for inflation, that would be an annual income of about $1,983,000 in 2020, not including stock bonuses. He had additionally previously been in financial trouble after he was ordered to pay $732,008 in back taxes in May 1932.[67]

Albert Russel Erskine committed suicide on July 1, 1933. After telling his family he was going to the bathroom to shave, he shot himself through the heart and was found dead by his

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[66] ALBERT RUSSEL ERSKINE, President. “Article 7 -- No Title.” *New York Times.* 1932, sec. AUTOMOBILES.
[67] “STUDEBAKER PUT IN RECEIVERSHIP: Auto Concern’s Debts Given as Under $6,300,000 and Book Value of Assets $96,500,000. CONSENT BY CORPORATION Receivers in Friendly Action Will Reopen South Bend Plant and Push Output and Sales.” *New York Times*. 1933.; “ERSKINE SUICIDE AT HIS ESTATE: Former Studebaker Head in Income Tax Suit Began Career as $15 Clerk, Later Got $100,000 Salary.” *Daily Boston Globe (1928-1960); Boston, Mass.* July 2, 1933.

adopted son, Albert Russell Erskine Jr. He addressed his suicide note to his son: “Russell: I can not go on any longer. Devotedly, A. R. E.” He was 62 years old.[68]

In describing his mental health, one of Erskine’s former colleagues, James Cleary, told a Chicago Daily Tribune reporter the following:

> “Mr. Erskine felt to an extraordinary degree a pride in the Studebaker name and a loyalty to the 81 year old institution. He had an acute sense that he was a trustee responsible equally to employees and stockholders. This led him to approve the friendly receivership as in the best interests of Studebaker even though it meant the immediate termination of his own income and of all authority in the management of the corporation--a blow to his personal interest and pride.”[69]

According to all accounts, Erskine was a kind and generous man who was swept up in the financial realities of the Great Depression. He committed suicide after losing his income and his purpose as president of Studebaker. While his death left a large paper trail, sadly he was only one of men and women who committed suicide after becoming unemployed during the Summer of 1933.

Unemployment was the most common reason in the financial distress category in the sample of obituaries from this period. Most were not businessmen making the equivalent of a million dollars a year. William Starlin, 39, committed suicide in August 1930 after losing his position with an ice company.[70] Samuel Clexton, 63, shot himself in the stone yard where he

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[68] “STUDEBAKER PUT IN RECEIVERSHIP: Auto Concern’s Debts Given as Under $6,300,000 and Book Value of Assets $96,500,000. CONSENT BY CORPORATION Receivers in Friendly Action Will Reopen South Bend Plant and Push Output and Sales.” *New York Times*. 1933.
[69] “STUDEBAKER PUT IN RECEIVERSHIP: Auto Concern’s Debts Given as Under $6,300,000 and Book Value of Assets $96,500,000. CONSENT BY CORPORATION Receivers in Friendly Action Will Reopen South Bend Plant and Push Output and Sales.” *New York Times*. 1933.
[70] “Suicide Is Verdict in Grocer’s Death.” The Atlanta Constitution (1881-1945); Atlanta, Ga. August 21, 1930.

formerly worked as a watchman before he was laid off.[71] Luther Rhodes, 59, took his own life after the loss of his position as a cement worker.[72] Peter Stein shot his neighbor and himself after he lost his job and blamed the neighbor.[73]

While businessmen like Erskine regularly published their opinions on the economy, for some, an obituary was their only platform. One man directly addressed the Government in his suicide note after failing to find employment. J. P. Seaborn left a three-page suicide note blaming the government. He claimed that relief efforts provided jobs for younger men but that "Uncle Sam would not help" a man of 48.[74] Purely looking at the ages and exclusively men from this small sample, it is clear that the suicide epidemic attributed to unemployment affected middle-aged and elderly men the most. This could be because men had breadwinner status and felt like they personally failed when they could not provide for their families.

Yet even as the unemployment rate fell in 1934, the crisis worsened for many. Here is a short list of quotes from their obituaries: "He shot himself below the heart because he was out of work and had been taunted for failure to obtain a job,"[75] "despondent over his inability to find work, "[76] "because of illness and discouragement over his career, "[77] "he said he was taking his life because he was unable to find employment, "[78] "Toney was believed by his wife to have been brooding over the loss of his job as a driver of a beer truck."[79] All these white men were

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71 "Obituary 4 -- No Title." Chicago Daily Tribune (1923-1963); Chicago, Ill. June 16, 1932.
72 "Jobless Man Finds Gun and Kills Self: Father Takes Life With Weapon His Family Had Hidden." The Washington Post (1923-1954); Washington, D.C. August 18, 1933, sec. Sports.
73 "Feud Ends; 1 Dead." The Washington Post (1923-1954); Washington, D.C. March 7, 1934.
74 "Unemployed Hotel Guest Found Dead: Norfolk Visitor's Last Note Deplores Age." The Washington Post; Washington, D.C. April 15, 1934.
75 "Called a Failure, Man Shoots Self: Roanoke Citizen Dies; Wounded Below Heart." The Washington Post (1923-1954); Washington, D.C. May 23, 1934.
76 "Obituary 1 -- No Title." Chicago Daily Tribune (1923-1963); Chicago, Ill. June 25, 1935.
77 "Obituary 11 -- No Title." Chicago Daily Tribune (1923-1963); Chicago, Ill. July 11, 1935.
78 "Obituary 2 -- No Title." Chicago Daily Tribune (1923-1963); Chicago, Ill. November 19, 1935.
79 "Truck Driver's Death Is Adjudged Suicide." The Atlanta Constitution (1881-1945); Atlanta, Ga. December 21, 1935.

middle-aged or older. More examples of financial reasons provided in suicides over this decade can be found in Table 7.

Within the sample, one obituary mentions the WPA's efforts to put middle-aged Americans back to work. 45-year-old Elyse Barrett committed suicide by turning on the gas range and stuffing a rug into the gap under the door after six years of unemployment. During this period of unemployment, he worked for the WPA from its start but was then laid off in 1937 when federal funding was cut. Barrett was a police officer for sixteen years before he was discharged, and he sought reinstatement at the police headquarters the Thursday before his death.[80] Eight years after the initial crash, the Great Depression still took its toll on everyday Americans as unemployment was a persistent menace.

[80] "Ex-Cop Suicide Is Discovered Dead From Gas." Philadelphia Tribune; Philadelphia, Penn. September 23, 1937.

Conclusion

Suicide rates greatly increased during the Great Depression and were largely influenced by increased stress and social isolation from record-breaking unemployment. However, both quantitative and qualitative evidence shows that the crisis impacted demographic groups differently. A statistically significant portion of suicide obituaries with financial motivations older and the male national suicide rate saw an increase in year-on-year change in self-inflicted mortality from 1929 to 1932 that was not replicable in the female data series. Further research is needed into how economic crises during the 20th century affected African American suicide mortality as vital statistics may systematically underreport Black mortality and newspapers in the ProQuest database did not include African American suicide obituaries. A research project examining the extensiveness of this discrepancy is needed. Additionally, researchers should use new econometric analyses to forecast national estimates of suicide rates by age, race, and gender before 1933 as the DRA may not be comparable annually.

Previous research on suicide during the Great Depression incorrectly characterized the record highs in 1932 as a continuation of a previous trend and limited to New York elites. However, the case of Erskine and quotes from obituaries show that people across the country felt professional failure was a personal indictment. To be clear, this paper does not argue that economic conditions exclusively cause an increase in suicides; rather they exacerbate the underlying risk factors of mental health and stress that could influence someone already prone to suicidal ideations.

One finding of this study is that previous research on the effect of New Deal spending on mortality may reach spurious conclusions if researchers do not consider measurement error in vital statistics. For example, aggregate changes in the national or state suicide rates may not demonstrate the full magnitude of the change in suicides for older, white men. Additionally, any panel data that considers vital statistics from after 1933 as a continuation of previous DRA rates and does not account for larger trends in mortality data may have biased coefficients if the time series is not stationary. As modern economists use econometrics to analyze historic panel data, increased scrutiny is needed to fully evaluate if their findings on federal government spending on mortality are valid. Lastly, this paper should provide background to researchers considering the impact of the COVID recession on deaths of despair as qualitative evidence is a vital companion to official mortality statistics.

The prevalence of employment-related suicides during the Great Depression rather than cases purely loss of cash or assets suggests that unemployment may lead to the loss of more than just an income stream. People's careers become part of their identities and regular work contributes to a sense of self. While these obituaries are only a sample, the qualitative evidence is telling. If the economy and specifically unemployment can influence people's decision on whether or not to commit suicide, then if policymakers take deliberate steps to improve the economy, maybe these deaths can be prevented. This is not to endorse a laissez-faire approach where corporate tax cuts will somehow trickle down to stop a man who just lost his job from picking up a revolver. Rather it is a public commitment to unemployed Americans who are out of work through no fault of their own. If the coronavirus crisis can be dealt with quickly and effectively by the federal government, taking lessons from the suicide increase during the Great Depression, then maybe Americans can avoid staring at obituaries similar to those analyzed in this thesis in tomorrow's paper.

Table 7: Sample of Suicide Obituaries with Financial Motives		
Newspaper	**Date**	**Quote**
Atlanta Constitution	November 10, 1929	"The reason for the act, police headquarters said, was heavy losses in the stock market"
Atlanta Constitution	November 30, 1929	"recent financial reverses ... was believed to have caused the coal magnate to become temporarily deranged"
New York Times	November 12, 1930	"At the time of his death, Hyland was under indictment in connection with a $13,000 shortage in the tax books ... Hyland had admitted using the missing money for purchasing stocks"
Washington Post	January 22, 1930	"Mr. Mullins had for some time been despondent over business reverses, friends said"
Washington Post	April 6, 1930	"Financial worries were credited by the police for his act"
Atlanta Constitution	July 4, 1930	"Despondent over the inability to find employment, she shut herself in her apartment yesterday"
Washington Post	August 11, 1930	"Act of retired businessman is held prompted by money trouble"
New York Times	December 6, 1931	"Friends said he had been despondence since his wife died two years ago and had worried over financial difficulties"
Chicago Daily Tribune	December 26, 1931	"despondent over ill health and financial reverses"
Atlanta Constitution	January 23, 1932	"Suicide Hints Fraud to Unnamed Parties in Letters Left in Room"
Chicago Daily Tribune	May 15, 1932	"Notes indicated stock losses prompted his act"
Chicago Daily Tribune	May 30, 1932	"his widow told the police that he had lost $15,000 in savings in the closing of a northside bank a year ago, and had recently lost $10,000 which he had loaned a friend"
Chicago Daily Tribune	June 16, 1932	"Despondency over unemployment was the reason assigned for the suicide"
Chicago Daily Tribune	July 18, 1932	"His widow told police he lost his savings when a bank closed"

Washington Post	October 10, 1932	"Fuller had become despondent over his failure to halt a foreclosure sale of his home"
Washington Post	December 21, 1932	"They found a note indicating that the woman had taken her life because of financial difficulties"
LA Times	July 15, 1933	"despondent and out of employment"
Washington Post	August 18, 1933	"Brooding over the loss of his job as a cement worker"; "Jobless Man Finds Gun and Kills Self: Father Takes Life With Weapon His Family Had Hidden"
Washington Post	April 15, 1934	"Despondent because he could not find employment … The man left a three-page letter in which he blamed the Government for his act. The letter stated that younger men were given employment but he could not find work and 'Uncle Same would not help'"
Washington Post	April 19, 1934	"Serange is believed to have committed suicide as the result of worry over the sale of his farm for taxes"
Washington Post	May 23, 1934	"He shot himself below the heart because he was out of work and had been taunted for failure to obtain a job"
Chicago Daily Tribune	June 25, 1935	"despondent over his inability to find work"
Chicago Daily Tribune	July 11, 1935	"because of illness and discouragement over his career"
Chicago Daily Tribune	November 19, 1935	"In notes left by Beal, he said he was taking his life because he was unable to find employment"
Atlanta Constitution	December 21, 1935	"Toney was believed by his wife to have been brooding over the loss of his job as a driver of a beer truck"
Washington Post	November 21, 1936	"Baltimore salesman, who entered a death pact with his wife, Minnie ... Frustration and financial difficulty attendant on his decline from sales supervisor to a job at a small salary selling materials was the reason for the double suicide before he died"
Chicago Daily Tribune	December 6, 1936	"It was becoming increasingly difficult for him to support his wife … and their two children, and that his only recourse was to make it possible for them to receive the $40,000 life insurance which he carried, the note also said. Detectives added that today was the final day of grace for payments of the premium, which Mr. Sheldon wrote that he could not meet"

Philadelphia Tribune	September 23, 1937	"It is believed that he was despondent over his failure to get work after six years of unemployment … Since that time he had been employed on WPA, but was laid off from the project where he worked"

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